



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,261	08/27/2001	David Lima	1014-011US01	4521

28863 7590 06/16/2004
SHUMAKER & SIEFFERT, P. A.
8425 SEASONS PARKWAY
SUITE 105
ST. PAUL, MN 55125

EXAMINER

CHANG, RICK KILTAE

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,261

Applicant(s)

LIMA ET AL.

Examiner

Rick K. Chang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) not listed in item 7 just below is/are rejected.
- 7) ☒ Claim(s) 29 and 34-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-11 and 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the inconsistency between the language in the preamble "a system" (line 1) and certain portions of the body of the claim such as "a removable component" (claim 1, line 2) and "a printed circuit board" (claim 9, lines 1-2) renders the scope of the claim vague and indefinite because it is unclear if the intent is to claim either the subcombination of the "a system" alone or the combination of the "a system" and "a removable component" and/or "a printed circuit board". The applicant is asked to please clarify what subject matter the claim is intended to be drawn to, i.e., the subcombination of the "a system" alone or the combination of the "a system" and "a removable component" and/or "a printed circuit board", where the language of the claim is to be amended to be consistent with this intent. The Examiner understands the applicants are claiming the combination.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3729

4. Claims 1-2, 7-8, and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by G. Geer (US 243,035).

Geer discloses a housing (U-shaped member A), an assembly (Fig. 4), a rotatable drive shaft (B), a handle (b), a first detent (beginning groove of B) receiving the pin (Fig. 4), a compression spring (d), a locking device (the second thread engaging portion of A). Geer discloses means for automatically aligning a drive shaft (a part of "A" next to "e" on the right-hand side close to "b" that first engages the helical groove of "B"); means for moving the first object (b); means for indicating the drive shaft has fully entered the receptacle assembly (when the last groove of "B" enters a part of "A" next to "e" on the right-hand side close to "b" that first engages the helical groove of "B"); A means for securing.

5. Claims 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ewing et al (US 4,939,908).

Ewing discloses a first tip of a first drive shaft (351 with treads at one end), a pin (332), a first receptacle assembly (306), a second number (threads inside 332); a handle 351 inserts and extract a printed circuit board to the system board 306; and at the last rotation of 351 fully seats the threads of 351 against the threads inside 332. Claim 16 is rejected as noted above in Paragraph 4.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Hoehn (US 4,615,274).

Geer teaches the invention as described as above.

Geer fails to disclose a first helical groove entry having a width greater than a width of the first helical groove, wherein at least a portion of the first helical groove entry is defined by a first inclined entry guide; a first groove point disposed at a first end of the first inclined entry guide; a transition portion disposed between the first inclined entry guide and the first helical groove; a second helical groove, a second groove point.

Hoehn discloses a first helical groove entry having a width greater than a width of the first helical groove, wherein at least a portion of the first helical groove entry is defined by a first inclined entry guide (Fig. 4); a first groove point (a microscopic spot at the first end of the thread located on the left-hand side in Fig. 4) disposed at a first end of the first inclined entry guide; a transition portion disposed between the first inclined entry guide and the first helical groove (Fig. 4 shows a shaft having various threads); a second helical groove (threads located on the right-hand side in Fig. 4) and a second groove point (a microscopic spot at the first end of the thread located on the right-hand side in Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by providing a first helical groove entry having a width greater than a width of the first helical groove, wherein at least a portion of the first helical groove entry is defined by a first inclined entry guide; a first groove point disposed at a first end of the first inclined entry guide; a transition portion disposed between the first inclined entry guide and the

Art Unit: 3729

first helical groove; a second helical groove, a second groove point, as taught by Hoehn, for the purpose of efficiently and economically indexing products.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Ewing et al (US 4,939,908).

Geer fails to disclose a printed circuit board inserted and extracted through rotation of the drive shaft.

Ewing discloses a printed circuit board inserted and extracted through rotation of the drive shaft (Fig. 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by inserting and extracting a printed circuit board through rotation of the drive shaft, as taught by Ewing, for the purpose of electrically communicating with other electronic devices.

9. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Molzer (US 6,354,119).

Geer fails to disclose a locking device, a threaded member, and a threaded connector.

Molzer discloses a locking device (124), a threaded member (92), and a threaded connector (88).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by providing a locking device, a threaded member, and a threaded connector, as taught by Molzer, for the purpose of preventing unwanted tempering.

10. Claims 12-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Doroftei (US 6,213,487).

Art Unit: 3729

Geer teaches the invention as described as above in Paragraphs 4-5. Geer discloses a housing (a part of "A" next to "e" on the right-hand side close to "b" that first engages the helical groove of "B"), a handle "b", "a" is a first object coupleable to a part of "A" next to "e" on the right-hand side close to "b" that first engages the helical groove of "B", a second object is "m"; Geer's apparatus is capable of coupling with a printed circuit board; "B" has a first enlarged entry including a first inclined entry guide.

Geer fails to disclose a pin disposed within the throughbore.

Doroftei discloses a pin disposed within the throughbore (260).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by disposing a pin within the throughbore, as taught by Doroftei, for the purpose of protecting the pin from environment to prolong the life of the pin.

11. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Hoehn (US 4,615,274).

Geer fails to disclose various enlarged entry with various inclined entry guide as disclosed in claims 18-23.

Hoehn discloses in Fig. 4 various enlarged entry with various inclined entry guide as disclosed in claims 18-23.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by providing various enlarged entry with various inclined entry guide as disclosed in claims 18-23, as taught by Hoehn, for the purpose of increasing and decreasing of the threads during entry into the Geer apparatus for fast alignment while slow movement during cutting of the removable component.

Art Unit: 3729

12. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over G. Geer (US 243,035) in view of Molzer (US 6,354,119).

Geer fails to disclose a locking device, a threaded member, and a threaded connector.

Molzer discloses a locking device (124), a threaded member (92), and a threaded connector (88).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by providing a locking device, a threaded member, and a threaded connector, as taught by Molzer, for the purpose of preventing unwanted tempering.

Allowable Subject Matter

13. Claims 29 and 34-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

14. Applicant's arguments filed 3/1/04 have been fully considered but they are not persuasive.

An apple is a removable component and moves relative to the housing. Examiner maintains that a first detent (beginning groove of B) receiving the pin (Fig. 4).

Fig. 4 of '274 teaches three different helical grooves with different widths.

Ewing discloses a printed circuit board inserted and extracted through rotation of the drive shaft (Fig. 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by inserting and extracting a printed circuit board through

Art Unit: 3729

rotation of the drive shaft, as taught by Ewing, for the purpose of electrically communicating with other electronic devices.

Molzer discloses a locking device (124), a threaded member (92), and a threaded connector (88). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Geer by providing a locking device, a threaded member, and a threaded connector, as taught by Molzer, for the purpose of preventing unwanted tempering.

Conclusion

15. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

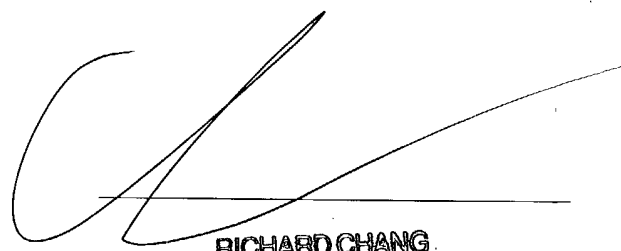
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (703) 308-4784. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Application/Control Number: 09/940,261

Page 9

Art Unit: 3729



RICHARD CHANG
PRIMARY EXAMINER

RC
June 14, 2004